

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 **Claim 1 (currently amended):** A heat cooking apparatus
2 having a heating chamber enclosed by plate members in which an
3 object to be heated ~~that is~~ housed in the heating chamber is
4 heated and cooked by a heater which is disposed along ~~a part~~ one
5 of the plate ~~member~~ members forming the heating chamber,
6 ~~wherein out of the plate members which form the heating~~
7 ~~chamber, at least the plate member which is directly heated by~~
8 ~~the heater is comprised of a stainless steel plate, and on a~~
9 ~~surface of an inner side of the heating chamber of this stainless~~
10 ~~steel plate, a self-cleaning layer is formed by coating a~~
11 ~~self-cleaning material, which is comprised of an oxidation~~
12 ~~catalyst which decomposes accreted dirt, by use of a porcelain~~
13 ~~enamel glaze as an accretion material~~
14 wherein, at least one of the plate members is directly
15 heated by the heater and is comprised of a stainless steel plate,
16 wherein a self-cleaning layer comprises a coating of
17 a self-cleaning material on an inner side of the stainless steel
18 plate as a porcelain enamel glaze as an accretion material,
19 wherein the self cleaning material comprises an
20 oxidation catalyst which decomposes accreted dirt.

1 **Claim 2 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, wherein the porcelain enamel glaze is ~~one~~

3 ~~in which one type or more powder out of powders for enameling~~
4 comprises adding one or more powders for enameling selected from
5 the group consisting of aluminum, iron, nickel, copper, chromium,
6 silver, bronze, and titanium is added to frit.

1 **Claim 3 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, wherein the self-cleaning material is
3 comprised of ~~one type~~ or more oxidation ~~catalyst~~ catalysts ~~out~~
4 selected from the group consisting of iron oxide, manganese
5 oxide, and copper oxide.

1 **Claim 4 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, ~~wherein the self-cleaning layer is formed~~
3 ~~by having the self-cleaning powder material, which is formed by~~
4 ~~having the self-cleaning material dissolved in the porcelain~~
5 ~~enamel glaze and powdered, mixed with water and by applying to~~
6 ~~the stainless steel plate and by bake-sticking a self-cleaning~~
7 powder material comprises dissolving the self cleaning material
8 in the porcelain enamel glaze and grinding the mixture into a
9 powder.

10 wherein the self-cleaning layer comprises mixing the
11 self-cleaning powder material with water,

12 wherein the self-cleaning layer is applied to the
13 stainless steel plate by bake-sticking.

1 **Claim 5 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, ~~wherein the self-cleaning layer is formed~~
3 ~~by having the self-cleaning powder material, which is formed by~~

4 ~~having the self-cleaning material dissolved in the porcelain~~
5 ~~enamel glaze and powdered, accreted to the porcelain enamel glaze~~
6 ~~which is applied to the stainless steel in advance and by~~
7 ~~bake-sticking~~ a self-cleaning powder material comprises
8 dissolving the self cleaning material in the porcelain enamel
9 glaze and grinding the mixture in to a powder,

10 wherein the self-cleaning layer is accreted to the
11 porcelain enamel glaze,

12 wherein the porcelain enamel glaze is applied in
13 advance to the stainless steel plate by bake-sticking.

1 **Claim 6 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, ~~wherein the self-cleaning layer is formed~~
3 ~~by having the self-cleaning powder material, which is formed by~~
4 ~~having the self-cleaning material dissolved in the porcelain~~
5 ~~enamel glaze and powdered, mixed with water and by applying to~~
6 ~~the stainless steel plate, and by having the self-cleaning powder~~
7 ~~material accreted to this powdered self-cleaning powder material~~
8 ~~and by bake-sticking~~ a self-cleaning powder material comprises
9 dissolving the self cleaning material in the porcelain enamel
10 glaze and grinding the mixture in to a powder,

11 wherein the self-cleaning layer comprises mixing the
12 self-cleaning powder material with water,

13 wherein the self-cleaning powder material is accreted
14 to the stainless steel plate in powder form,

15 wherein the self-cleaning layer is applied by bake-
16 sticking.

1 **Claim 7 (currently amended):** The heat 'cooking apparatus as
2 set forth in Claim 1, wherein the heater is disposed on a back
3 side of a rear face plate ~~which forms~~ forming the heating
4 chamber[[,]] and wherein the self-cleaning layer is ~~formed on~~
5 applied to the rear face plate.

1 **Claim 8 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, wherein the heater is disposed on an upper
3 side of a top face plate ~~which forms~~ forming the heating
4 chamber[[,]] and wherein the self-cleaning layer is ~~formed on~~
5 applied to the top face plate.

1 **Claim 9 (currently amended):** The heat cooking apparatus as
2 set forth in Claim 1, wherein a rear face plate includes a
3 plurality of air intake use through-holes and a plurality of air
4 blowing use through-holes ~~are formed in the rear face plate, and~~
5 wherein disposed on a back side of the rear face
6 plate, ~~disposed~~ is a circulation fan which sucks air [[in]] from
7 the heating chamber ~~from through~~ the air intake use ~~through-hole~~
8 through-holes where after the air is heated by the heater, and
9 wherein a collection plate having a plurality of
10 through-holes is positioned inside at an inner side of the
11 heating chamber, ~~of the rear face plate, placed is a collection~~
12 plate ~~having a plurality of through-holes, and~~
13 wherein the collection plate covers the rear face
14 plate ~~is covered by the collection plate.~~

1 **Claim 10 (currently amended):** The heat cooking apparatus as

2 set forth in Claim 9, wherein the collection plate is detachably
3 ~~placed~~ positioned in the heating chamber.

1 Claim 11 (currently amended): The heat cooking apparatus as
2 set forth in Claim 9, wherein the collection plate ~~is comprised~~
3 ~~of~~ further comprises a corrosion resistance steel plate, ~~and~~
4 having a fluorine resin coat layer applied to ~~on at least a~~
5 ~~surface thereof of an inner side of the heating chamber, a~~
6 ~~fluorine resin coat layer is formed.~~

1 Claim 12 (currently amended): The heat ~~cooling~~ cooking
2 apparatus as set forth in Claim 9, wherein the collection plate
3 ~~is comprised of~~ further comprises a porcelain enameling use steel
4 plate, ~~and after applying the porcelain enamel glaze as a ground~~
5 ~~coat, the self-cleaning material is applied and baked, and~~
6 ~~thereby, wherein~~ the self-cleaning layer ~~is formed~~ comprises
7 applying the porcelain enamel glaze to the collection plate and
8 applying the self-cleaning material to the porcelain enamel glaze
9 and baking both layers.

1 Claim 13 (currently amended): A self-cleaning functional
2 material ~~characterized in that a self-cleaning layer is formed~~
3 ~~in such a manner that, on a surface of a substrate which is a~~
4 ~~stainless steel plate, a self-cleaning material, which is~~
5 ~~comprised of oxidation catalyst which oxide-decomposes accreted~~
6 ~~dirt at high temperature, is coated by use of a porcelain enamel~~
7 ~~glaze as an accretion material~~ comprising:
8 a self-cleaning material further comprising an

9 oxidation catalyst that oxide-decomposes accreted dirt at high
10 temperatures,

11 wherein a self-cleaning layer comprises coating the
12 self-cleaning material to a substrate using a porcelain enamel
13 glaze as an accretion material,

14 wherein the substrate is a stainless steel plate.

1 **Claim 14 (currently amended):** The self-cleaning functional
2 material as set forth in Claim 13, wherein the porcelain enamel
3 glaze ~~is one which is formed by~~ comprises adding one ~~type~~ or more
4 ~~powder~~ powders ~~out of powder~~ for enameling selected from the
5 group consisting of aluminum, iron, nickel, copper, chromium,
6 silver, bronze, and titanium to frit.

1 **Claim 15 (currently amended):** The self-cleaning functional
2 material as set forth in Claim 13, wherein the self-cleaning
3 material ~~is comprised of~~ further comprises an oxidation catalyst
4 of one ~~type~~ or more ~~out~~ selected from the group consisting of
5 iron oxide, manganese oxide, and copper oxide.

1 **Claim 16 (currently amended):** A method of applying ~~The the~~
2 self-cleaning functional material as set forth in Claim 13,
3 ~~wherein on a surface of the substrate a ground coat layer of the~~
4 ~~porcelain enamel glaze, and a self-cleaning layer containing the~~
5 ~~self-cleaning material are formed in this order~~ comprising the
6 steps of:

7 applying the porcelain enamel glaze to a surface of
8 the substrate; and,

9 applying the self-cleaning layer to the porcelain
10 enamel glaze, wherein the self-cleaning layer further comprises
11 the self-cleaning material.

1 **Claim 17 (currently amended):** A manufacturing method of the
2 self-cleaning functional material as set forth in Claim 13, ~~and~~
3 comprising the steps of:

4 ~~a manufacturing method of the self-cleaning method~~
5 ~~characterized in that the self-cleaning layer is formed by having~~
6 ~~a self-cleaning powder material, which is dissolved in the~~
7 ~~porcelain enamel glaze and powdered, mixed with water and by~~
8 ~~applying to the substrate and by bake-sticking~~

9 providing a self-cleaning layer further comprising the
10 steps of:

11 dissolving a self-cleaning material in the
12 porcelain enamel glaze to form a mixture;

13 grinding the mixture to form a self-cleaning
14 powder material;

15 mixing the self-cleaning powder material with
16 water to form the self-cleaning layer; and

17 applying the self-cleaning layer to the substrate by
18 bake sticking.

1 **Claim 18 (currently amended):** A manufacturing method of the
2 self-cleaning functional material as set forth in Claim 13, ~~and~~
3 comprising the steps of:

4 ~~a manufacturing method of the self-cleaning method~~
5 ~~characterized in that the self-cleaning layer is formed by~~

6 ~~accreting a self-cleaning powder material, which is dissolved in~~
7 ~~the porcelain enamel glaze and powdered, to the porcelain enamel~~
8 ~~glaze which was applied to the substrate in advance and by~~
9 ~~bake-sticking~~

10 providing a self-cleaning layer further comprising the
11 steps of:

12 dissolving a self-cleaning material in the
13 porcelain enamel glaze to form a mixture;

14 grinding the mixture to form a self-cleaning
15 powder material;

16 applying the porcelain enamel glaze to the
17 substrate by bake sticking; and

18 accreting the self-cleaning powder material to
19 the porcelain glaze.

1 **Claim 19 (currently amended):** A manufacturing method of the
2 self-cleaning functional material as set forth in Claim 13, ~~and~~
3 comprising the steps of:

4 ~~a manufacturing method of the self-cleaning method~~
5 ~~characterized in that the self-cleaning layer is formed by having~~
6 ~~a self-cleaning powder material, which is dissolved in the~~
7 ~~porcelain enamel glaze and powdered, mixed with water and by~~
8 ~~applying to the substrate and by accreting the self-cleaning~~
9 ~~powder material in powder form to this applied self-cleaning~~
10 ~~powder material and by bake-sticking~~

11 providing the self-cleaning layer further comprising
12 the steps of:

13 dissolving a self-cleaning material in the

14 porcelain enamel glaze to form a mixture;
15 grinding the mixture to form a self-cleaning
16 powder material;
17 mixing the self-cleaning powder material with
18 water to form the self-cleaning layer;
19 accreting the self-cleaning powder material in powder
20 form to the substrate; and,
21 applying the self-cleaning layer to the substrate by
22 bake sticking.